

- 1 1. (original) A maskless lithography system comprising an array of blazed diffractive zone
2 plates, each of which focuses an energy beam into an array of images in order to create a
3 permanent pattern on an adjacent substrate.
- 1 2. (original) The maskless lithography system as claimed in claim 1, wherein said blazed
2 diffractive zone plates are blazed Fresnel zone plates.
- 1 3. (currently amended) ~~[An]~~ A maskless lithography system comprising an array of
2 apodized diffractive elements, each of which focuses an energy beam into an array of images in
3 order to create a permanent pattern on an adjacent substrate at a focal area and is apodized to
4 reduce at least one of the ~~[main-or]~~ side lobes in an intensity distribution at a focal area.
- 1 4. (original) The maskless lithography system as claimed in claim 3, wherein apodized
2 diffractive elements are Fresnel zone plates.
- 1 5. (original) The maskless lithography system as claimed in claim 3, wherein apodized
2 diffractive elements are Fresnel phase plates.
- 1 6. (original) The maskless lithography system as claimed in claim 3, wherein apodized
2 diffractive elements are blazed Fresnel zone plates.
- 1 7. (original) The maskless lithography system as claimed in claim 3, wherein said apodized
2 diffractive elements are formed of photon sieves.
- 1 8. (original) The maskless lithography system as claimed in claim 7, wherein said photon

2 sieves are amplitude photon sieves.

1 9. (original) The maskless lithography system as claimed in claim 7, wherein said photon

2 sieves are phase photon sieves.

1 10. (original) The maskless lithography system as claimed in claim 7, wherein said photonic

2 sieves are alternating phase photonic sieves.

1 11. (original) A maskless lithography system comprising an array of diffractive elements,

2 each of which focuses an energy beam into an array of images in order to create a permanent

3 pattern on an adjacent substrate and has a focusing efficiency of at least 50%.

1 12. (original) The maskless lithography system as claimed in claim 11, wherein said

2 diffractive elements are 100% transmissive.

1 13. (original) The maskless lithography system as claimed in claim 12, wherein said

2 diffractive elements are alternating phase photon sieves.

1 14. (currently amended) A maskless lithography system comprising an array of **[Besel]**

2 **Bessel** zone plates, each of which [~~focuses an energy~~] **converts an energy** beam into an array of

3 **[images] Bessel beams** in order to create a permanent pattern on an adjacent substrate.